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1853



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City Document.—No. 9.

CITY OF BOSTON.



REPORT

OF THE

CITY PHYSICIAN,

JANUARY, 1853.

In Common Council, January 27, 1853.

Read and ordered to be sent up and printed.

HENRY J. GARDNER, *President.*

In Board of Mayor and Aldermen, Jan. 31, 1853.

Concurred.

BENJ. SEAVER, *Mayor.*

American Statistical
Association.
Jan. 25, 1904.

REPORT.

City Physician's Office,
January, 1853.

To the City Council *of the City of Boston.*

Gentlemen:

The undersigned respectfully reports; That there have been vaccinated at his office during the past quarter, one hundred and seventy persons.

There have been examined and supplied with certificates of the same, two hundred and sixty-eight.

Physicians supplied with vaccine lymph, twenty-nine.

From a more general and early resort to the protective power of vaccination, (or from the natural and spontaneous subsidence which usually succeeds to an extraordinary prevalence of an epidemic disease,) Small-pox, for the last two or three years, has rapidly diminished in this city. During the past year there have been but twelve deaths from it, and during the past ten months only two.

The County Jail has been visited as usual, and the sick attended to as well as the good discipline of a prison will permit.

It may be proper to mention here, as confirmatory of the propriety of measures which are in progress elsewhere for more extensive accommodations for the insane poor, that many individuals of this class have been temporarily lodged at the Jail, some of whom it has been necessary to retain there for many days, owing to the difficulty of obtaining admission for them into places better suited to their condition. This appropriation of the prison, so foreign to its original purpose, it is to be hoped, will hereafter be made less necessary.

There is another subject which I hope I shall be excused for bringing in this way to the notice of the City Council. I allude to the very disproportionate mortality which always prevails among the laboring classes of our population.

It appears from the records of the City Registrar that about *one-half of all the deaths in the city have taken place among "foreigners and their children;"* a class constituting, according to late census returns, less than one-third of the whole number of the inhabitants; that is to say, the proportion of deaths in that *third* of the population, which includes the great mass of the laboring poor, and which does not *exclude many* in good circumstances, is *one hundred per cent.* greater than in the remaining *two-thirds.*

This appears to be chiefly the result and the natural consequence of the overcrowded state of the dwellings of the poor, and is an evil which, the continual displacement of these buildings by the great warehouses demanded by increasing commerce, is making every day more serious.

This evil, it is obvious, can only be remedied by the erection, on a very extensive scale, of buildings which are better adapted for residence, by being furnished with

suitable facilities for drainage, and an abundant supply of light, air and water, at reasonable rates.

In a private way, and in very judicious hands, this enterprise has already been commenced; but, in order to be effectual to the relief of thousands who now suffer from evils of which they are unable to relieve themselves, such a movement should have the countenance and encouragement of the City Government; and, when accomplished, the interference of the Board of Health to vacate, forcibly, if need be, all tenements unfit for healthy occupation.

I have the honor to remain,

Gentlemen, your obedient servant,

HENRY G. CLARK,

City Physician.

635.8.71

City Document.—No. 68.

CITY OF BOSTON.



QUARTERLY REPORT

OF THE

CITY PHYSICIAN,

FOR OCTOBER, 1853.

C

In Common Council, November 3, 1853.

Laid on the table and ordered to be printed.

Attest: W. P. Gregg, *Clerk C. C.*

American Statistical
Association.
Jan. 23, 1924.

City Physician's Office,

October, 1853.

To the City Council of the City of Boston:

Gentlemen, — I have the honor to present the quarterly return of the "doings" of this office, and to submit, for the information of the Council, together with some remarks upon other kindred matters, a statement of the reasons for the Sanitary measures lately adopted by the Board of Health, upon the joint recommendation of the Port Physician and myself, in relation to vessels arriving here from sickly ports in the tropics.

The number of persons vaccinated has been one hundred and fifty; examined and furnished with certificates of the same, two hundred and fifty-seven; physicians furnished with virus, twenty-five.

With great respect, I remain, gentlemen,

Your obedient servant,

HENRY G. CLARK,

City Physician.

It will be recollected that, in August last, upon information being received here that sundry vessels were on their way from places then affected with Yellow Fever, the following order was immediately issued, and copies of it were served upon the Harbor Master and each of the Pilots.

DEPARTMENT OF HEALTH.

City of Boston,

August 22, 1853.

To the Harbor Master and Pilots of the Port of Boston :

Gentlemen, — We are instructed by His Honor, the Chairman of the Board of Health, to request you to take every Vessel which may arrive here from ports where *Yellow Fever* is now prevailing, or which may have cases of this disease on board, immediately into *Quarantine*, there to await an examination by the Port Physician, and to obtain his permit, without which she cannot land her cargo.

None of the passengers or crew will be in any way restrained, from freely communicating with their friends on shore, or with the City, or from landing at any time with their personal baggage and effects ; and no Vessel will be detained in Quarantine longer than is absolutely necessary to put her into a safe condition to come up to the wharves.

HENRY G. CLARK, *City Physician.*
J. M. MORIARTY, *Port Physician.*

This order has been, in most instances, faithfully carried out, and cheerfuliy complied with; and it is to be regretted that, with so little reason, any attempts should have been made to avoid its provisions. Certainly, no man ought to escape censure who, for any temporary advantage to himself, is willing to do what (at least in the opinion of those who are best able to judge) is at all likely to endanger the health or security of his fellow-citizens.

It is true, that, as formerly enforced, *Isolative* Quarantine Regulations were no doubt often unreasonably severe and uselessly oppressive; but there is no propriety in objecting to Sanitary or Hygienic measures, which are really as much for the advantage and safety of those who are immediately connected with the vessels, as for the protection of the public at large.

In order, therefore, that all parties interested may be able to satisfy themselves (on this or a future occasion) of the propriety of such measures, I propose to state, in a plain way, the general grounds upon which these, and similar, Sanitary Regulations are now defended and enforced. The order quoted, it will be observed, relates solely to Yellow Fever, that appearing to be at the time the only subject requiring immediate action.

Quarantines have been heretofore enforced upon the theory of excluding diseases supposed to be contagious or infectious, by *isolating* the persons of the sick from contact or communication with the unaffected; and they have often been absurdly and ignorantly enforced against diseases which had neither quality, but which, from their great mortality, have unusually excited the fears of mankind.

In order that an accurate idea may be had of the words *Infection* and *Contagion*, I will insert here the definition now assigned to them by the highest authority.*

"By *Contagion* is meant the power of communicating disease, from the *person* of an individual laboring under it, to that of another, whether by actual contact through the medium of linen, bedding, or any substance whatever; through the medium of the air, in a room in which an individual labors under the disease; the capability of being propagated by means of excretions or exhalations from the bodies of those affected; or, finally, by means of exhalations from the bodies of those who have died of it."

"By *Infection* is meant a principle which produces the disease, depending altogether upon *local* causes, and having no relation to emanations from persons laboring under the disease, or from the bodies of those who have died of it. Thus a malaria spot, or a filthy locality, is a *focus of* INFECTION."

With these definitions, I shall be understood when I state that it is now a very well settled opinion, among medical men, that *Yellow Fever is not* CONTAGIOUS.

The few persons who still remain as the advocates of contagion may be comprised under the two classes, of those who have not had sufficient opportunities for studying the disease, or of those whose connection with lucrative offices in Quarantine establishments should entitle their opinions to but little consideration.

* See in second Report on Quarantine, p. 157, a note addressed by Dr. Gillkrest, Inspector General of Army Hospitals, to the General Board of Health.

There is not upon record, to my knowledge, a single well authenticated case of personal contagion, nor any *supposed* case of such which cannot be better explained upon some other hypothesis.

Mr. Amiel, an English Army Surgeon, at Gibraltar, gives some most interesting statements with regard to the fever at that place, which I will preface by some remarks by Dr. Gillkrest, as evidence of the weight which ought to be accorded to such facts.

"The calamity of an epidemic at Gibraltar affords greater facilities, for the establishment of truth, as to its origin and progress, than perhaps any other place whatever.

"Its surface is very limited; it is under strict military government and police, affording all the means, *when so wished by the authorities*, for the most scrutinizing investigation; and the population (civil and military about 22,000) not sufficient to embarrass the ready attainment of facts, yet large enough to give all materials necessary for drawing solid conclusions.

"Under the circumstances ample opportunities are afforded for the detection of erroneous statements."

Mr. Amiel says: "An individual laboring under this disease, on being removed to a pure air, such as the *Neutral ground* did not communicate the disease to those in the closest contact with him. The Dèpot consisted of nearly six hundred men, sixty of whom were permanently employed in the different departments in town, or as servants to the officers. These men on being attacked, *(and not one escaped,)* generally came to the barracks, (on the neutral ground, and at Europa Point,) yet neither their breath, or the effluvia of their

bodies, ever proved contagious to their companions. None of the nurses took it. Out of four thousand Spaniards, *not one* took the fever at the Neutral ground,* although the communication with the town, at a distance of a few hundred rods only, was constant."

Dr. W. Ferguson, Inspector General of Hospitals, who had great experience here and elsewhere, speaking of contagion, says: "It was impossible that we could, in the face of the every-day experience of our lives, believe in it; and if we had, the very women and drummers of the army would have laughed us to scorn, because they had long discovered that there was not the smallest danger to be apprehended from the closest proximity; all were sensible that no safer duty could be imposed than that of attending the sick bed."

The following statement, in relation to the last epidemic at New Orleans, which has been communicated to me by an intelligent merchant of that city, goes strongly to the same effect.

"There have been employed, during the past season, in a swamp about two and a half miles *south* of the city, at wood cutting, twenty-six laborers, most of them unacclimated, who have been wholly exempt from fever or any other sickness, while within two miles *north* of them sixteen men who were at work, on the Opelousas Railroad Dèpot, all took the fever, and fifteen of them died. The wood-choppers in the swamp, hearing of the sickness, determined to remain there (as they did) all summer, being visited regularly by the man who brought their provisions. At the *northward* of the

* This is a peninsula, in a position fully exposed to the pure airs of the ocean, but *not to those from town.*

city, at a distance of twenty or thirty miles, the fever broke out among the men at work on the Northern Railroad, and many of them died. The prevailing wind during the summer is from the *south.* It blows so steadily from that quarter that it may with propriety be called a trade wind; and this may account for the prevalence of fever at the leeward of the city, and the total exemption from it to windward."

I have known the history of a number of cases of this fever in Boston, and at the Chelsea Hospital, and have also, in 1837, treated several such in the north part of the town, but I never knew or heard of any contagion from either of them.

Finally, Dr. Chervin, of Paris, to whom was awarded the Montyon prize of the French Academy, in 1827, for *proving*, to the satisfaction of the Governments of Europe, that Yellow Fever was not contagious, and who, not satisfied with the knowledge that it was not contagious in Guadaloupe, after having collected the evidence of hundreds of medical men in all parts of the world, "visited," in the language of Dr. Gillkrest, "in eight years, all the colonies belonging to the European Governments; all parts of North America, from New Orleans to Portland, ranging over 37 degrees of latitude;" gives his most decided opinion *against* the contagiousness of Yellow Fever.

Is it then *infectious?* or can it be *imported?* Many object to the use of this latter term, who are still willing to admit the main fact, which is, that *Yellow Fever may be, and often has been, produced in a healthy port in those who are exposed to the atmosphere or other influences existing in and about vessels which have come from sickly ports;* that is to say, there are local condi-

tions, resulting from the presence of decaying and putrid matters, which are confined on shipboard after being exposed to the heats and malignant vapors of the tropics where fever is prevailing. And there is no doubt that a personal exposure on board of such vessels would be as likely to produce Yellow Fever as would a temporary visit to the original seat of the infection itself. All vessels are not equally sources of infection. The difference may depend upon various causes, such as the kind of cargo, and its liability to decomposition; to the length of time spent in the sickly port; the precautions taken to air and cleanse the vessel on her voyage, &c.

That *Yellow Fever is* INFECTIOUS, reference being always had to the definition of "*infection*," in contradistinction from that of "*contagion*," I think is now the universally received opinion.

In the First Report on Quarantine, of the General Board of Health,* I find the following remarks: "A foul ship is not only a centre of disease to those on board, but a source of disease to her neighborhood. From a variety of evidence, it appears indisputable that while the foul state of a ship's hold is the frequent cause of malignant fever to her crew, *the air issuing from such a hold and the cargo taken from it, are capable of producing disease in the neighborhood of the wharf where the unloading takes place, and of affecting persons who come on board from the shore.*"

Dr. Alexander Vachè, Health Commissioner in the State of New York, and whose letters on this, and other kindred subjects, addressed to the "House of Assembly," contain many interesting facts and opinions,

* Page 110.

writes as follows; "That Yellow Fever may be brought to this city (N. Y.) from abroad, or, in other words, that vessels arriving at this port from places where it prevailed, *can communicate the disease by the liberation of the poison on opening the hatches*, and *especially on breaking out the cargo and ballast*, to persons either on board or on shore, — whether the more or less acclimated crews *be in health or not*, — few individuals acquainted with the history of the Lazeretto will deny."

Among the numerous instances, and as a type of the whole, I give the following extracts from another report to the House of Assembly: "The ship *Fame* arrived at New York from the West Indies, in the latter part of July, and came to the wharf next below New Slip, and lay there for some time, and on the 3d and 4th of August her ballast was discharged, and she pumped out. In her ballast was damaged coffee, extremely putrid, which, with the water from the pumps, was so offensive to the smell that the neighbors were induced to shut their windows, especially while eating. On the 6th, a number of persons spent most of the day at "Mead's" house, on the lower corner of the west side of the slip, (where the disease appeared first, subsequent to its appearance in Cœnties Slip) and dined there. While at dinner they were under the necessity of shutting up the doors and windows, though the weather was very warm, so exceedingly were they annoyed by the stench from the slip. Of this company not one escaped the disease, and two died."

"In the house, and the then adjoining houses, eleven persons took the disease, and five of them died. And many of the boatmen, whose vessels were in the slip at

the same time, were also victims to this stench, or the contagion it produced."

But frequent instances of the fatal effects of direct exposure to the holds and atmosphere of such ships are not wanting in our own port. I need only refer to the case of the "Ten Brothers," as one of the most remarkable examples. The fever however existed near Fort Hill *previously* to this vessel's arrival; the local causes on shore operating no doubt to aggravate its malignancy.

Ships have arrived here from sickly southern ports with "all hands" well on board, and after "breaking bulk" have been known to lose half their men within a week, of Yellow Fever, they having been exposed to the noxious emanations from the holds and ballast.

In the year 1837, a cooper residing at 42 Prince street, having for several days been at work on some casks on board a vessel from Charleston, S. C., was taken sick, and, in a few days, died of Yellow Fever. A stevedore, living in Charter street, having been employed in getting out some of the cargo, had the fever lightly and recovered. A young man, who had resided here during the season, took the fever by sleeping on board a small vessel from the South, which lay at Battery wharf, and died shortly after at Chelsea Hospital. The owner of this vessel and his clerk, besides a number of other well-known merchants, (several of whom died after similar exposure,) also had the fever.

In no instance, did any person take this disorder from exposure to the persons or the atmosphere of the sick; but only those who were exposed to the *local sources of the disease*, either on board ship or to the cargo during the process of its discharge.

The two points, then, which we are to consider settled, are:

1. *That Yellow Fever is* NOT CONTAGIOUS.
2. *That it is* INFECTIOUS.

What, then, is the proper course to be taken with vessels arriving here during the season from infected places?

Precisely what would be done with a dwelling-house infected with a malignant disease, viz:

1. Avoiding anything like an Isolative Quarantine, to remove from on board, at the earliest moment, all the passengers, and as many of the crew as can be spared from the necessary operation of cleansing the vessel.

2. To restrict none who are able to take care of themselves in their personal movements, but to permit them freely to communicate with their friends and the city.

3. To detain the vessel long enough at Quarantine to examine her, and, if she is found to have any decomposing or fermenting substances, or collections of filth, in the cargo or among the ballast, to discharge and cleanse her thoroughly.

4. *To continue these sanitary measures at least until the occurrence of a decided frost.*

With these measures fully carried out, we shall at once place the sick in the most favorable situation for recovery — remove those who are well from the danger of local poison — and protect the community from unnecessary exposure and alarm.

There will be none of the hardships of a Quarantine, as formerly enforced, but the substitution therefor of the simple Hygienic regulations which are necessary for the welfare of all concerned.

With regard to the two other malignant diseases, Ship-Fever and Cholera, to which we have been, and shall doubtless continue to be exposed, I respectfully refer the Council to documents* already furnished them on those subjects, as containing such information as I am able to give, simply remarking that all three of these great devastators of the human race can be so much controlled by preventive sanitary measures as materially to diminish their mortality, and limit their spread.

In the mean time, it is not the part of wisdom to wait for their approach before we act. The disturbance of the accumulations of filth, during the progress of an epidemic disease is often injudicious, and is sometimes even the cause of its temporary aggravation. So that, to produce the best results, we must "in peace prepare for war."

The existence of cholera this season in Europe, and in some parts of this country, gives us timely notice that it may, another season, reach our own vicinity.

By a reference to our bills of mortality, several districts of the city show a number of deaths quite disproportionate to the population, and *a good part of the excess of which may be attributed to removable local causes, such as overcrowding, deficient drainage, accumulations of filth, &c. &c.*

* "An Essay on Ship Fever. Boston, 1850. Ticknor, Reed & Fields." And a "Report on Cholera—City Document No. 66, 1849."

A daily and systematic course of inspection,—for which most of the persons now employed on the police force, under a suitable organization, would be quite competent,—followed up by energetic action, would not only diminish the mortality from the extraordinary, but from the more common and unnoticed, causes of disease and death.

Dr. Edw.d Jarvis,
with the regards of
the Author.

QUARTERLY REPORT

AMERICAN
STATISTICAL
ASSOCIATION

OF THE

CITY PHYSICIAN,

6358.7

JANUARY, 1859.



BOSTON:
GEO. C. RAND & AVERY, CITY PRINTERS,
No. 3, Cornhill.
1859.

QUARTERLY REPORT

OF THE

Edward Jarvis

CITY PHYSICIAN,

JANUARY, 1859.



BOSTON:
GEO. C. RAND & AVERY, CITY PRINTERS,
No. 3, Cornhill.
1859.

American Statistical
Association.
Jan. 23, 1904.

CITY OF BOSTON.

City Physician's Office,
January, 1859.

To the City Council of the City of Boston;

The undersigned respectfully

REPORTS:

The number of persons vaccinated in this office since the last return is 383.* Number of children examined and furnished with certificates is 257.† Physicians belonging to the city gratuitously supplied with virus, 127 times.‡

The sick at the Jail have been carefully attended and prescribed for as usual. There have been, during the past year, three deaths and an equal number of births at that institution. Of the deaths, two were those of Cater and Magee, convicted of murder at the State Prison, and sentenced to death. Cater died of disease of the lungs. Magee was executed. With regard to his case I intend to make some further remarks hereafter.

The city has been unusually healthy during the past year, there having been no epidemic disease prevalent. There were in the summer a few cases of yellow fever, all of which were directly traceable to the shipping arriving here from southern ports. The number of fatal cases in the city proper was only four, and there was no tendency in the disease to spread.

* During the year, 1,625. † During the year, 597. ‡ During the year, 268.

Our Quarantine laws, although less onerous perhaps than those of any other city, are yet sufficiently effective; and, as enforced by your most able and faithful officer, the Port Physician, accomplish all that can be desired. In this connection I am happy to be able to give you the opinion of Dr. John Jeffries, one of the Consulting Physicians, as expressed to His Honor the Mayor, after a visit to the Quarantine Station, with the Committee of External Health. In the meantime, we may congratulate ourselves that, while our neighbors at New York have suffered much from riots and bloodshed, and an immense pecuniary loss, we have suffered nothing and been saved everything. Dr. Jeffries, in referring to these occurrences, and in regard to the general subject of Quarantine, &c., expressed himself in substance as follows: "The medical profession in Boston is in advance of the knowledge of physicians in most other parts of our country on the subject of Quarantine, — not because of any assumed eminence in knowledge, but because of their position in being able to form unbiased and unprejudiced opinions on the subject. But I think the civil authorities have not yet advanced quite so far in ameliorating the restrictive regulations of Quarantine as the opinions of physicians would justify — or perhaps I should rather say that public opinion was somewhat behind that of intelligent medical men on this subject. There are various reasons which might operate on the minds of physicians in some of our seaports to make them slow to adopt what seemed to us in Boston to be just conclusions on this subject. One of the causes which might operate to bias their judgment may perhaps be found

in their unwillingness to allow that the severe and often fatal diseases with which they are so frequently visited are of sporadic origin. They are unwilling to allow that the climate of their locality is unhealthy, and would rather attribute the occurrence of disease to foreign importation, and have endeavored by restrictive regulations to prevent its introduction." Adverting to the influence of a strict as opposed to a lax Quarantine, upon commercial interests, he said: "The shipping is of course driven from those ports where the regulations act as a heavy tax upon vessels and cargo, into those ports where the admission is more free and immediate. This would operate more favorably for Boston." He also spoke of "the happy results of the Convention on this subject, and of the beneficial influence of the gentlemen from Boston in modifying the opinions of those from other parts of our seaboard, and expressed the satisfaction which he felt in having the various points of the sanitary system placed in the hands of committees composed of able and intelligent men;" and concluded by expressing the opinion that "we are indebted in this city, more to the internal regulations promoting cleanliness and sobriety, for the health of our citizens and the exemption of the city from fatal epidemics, than to any restrictive laws of Quarantine."

To this I need add nothing further, because, in a succinct and complete manner, it covers the whole ground. I will therefore only in this connection remark that one of the expected good results of the "Quarantine and Sanitary Convention," will be to lead to the adoption by that body of a code of Quarantine laws more like our own, and more in consonance with

what we believe to be a more enlightened and advanced state of sanitary science. In the appointment of the committees to prepare reports for the next meeting, to be held in New York, Dr. Moriarty and myself, among others, were honored with places upon those to which were referred the discussion of the whole range of matters relating respectively to External and Internal health, or Quarantine and Sanitary laws; with instructions to report in print for the revision and adoption of the Convention. Dr. Jewell, of Philadelphia, is Chairman of the first, and Dr. Thomas Miller, of Washington, of the second, and there are associated with them several other well known and influential gentlemen from various parts of the Union; so that, if approved by the Convention, the Codes reported will also probably be adopted by all the principal commercial cities, and thus an essential uniformity, instead of the present inconvenient diversity of regulation, will eventually be secured.

For the Sanitary Committee, the duty of making a draft for the Health act has been assigned to me; a duty from which I should have excused myself, on the score of inability to do justice to it, but the whole field has been so thoroughly prepared in its main features, to our purpose, by the English General Board of Health, as to make the task of selecting from and codifying the various acts, a more easy and possible one; and this work is now progressing.

I have, during the past summer, by the courtesy of the Superintendent of Drains, examined the outlets of nearly all the great sewers. Several of them, — and it was very easy to see why,—had been a source of serious

complaint to those who resided, or whose avocations brought them daily, near to them. The difficulties are removable ones, and it is to be hoped that at some early period such radical measures as are necessary will be adopted. For it is the proper care of the drainage, upon which, more than any other, perhaps more than all other sanitary measures, depend the safety and health of the inhabitants of any city.

With regard to the nuisances so much complained of during the summer, at the foot of Mt. Vernon street, it ought to be stated that the defective structure of the drain was only one of the contributing causes; and that the state of transition between the free occupation and flow of tide-water, and the intrusion upon the domain of the sea by the structures of man, is the efficient and controlling cause, and that therefore the inconveniences, though great, can only be wholly removed by the completion of changes which are necessarily the work of time. There is no doubt, however, that our whole system of sewerage should be so arranged that all its parts should bear a consistent relation to each other; and that the *private* drains, as well as the public, should be entirely under the control of the superintending officer of that department.

The discharge of the great drains, as several of them do, in shoal water, at the head of the docks, is a capital error, and one which should be corrected at any cost.

The experiments of interception and deodorization, although succeeding very admirably on a small scale, do not appear to warrant any very expensive attempts in this direction upon a very large one. The most

judicious sanitarians now advise that the sewage should be discharged into deep water, where it cannot be returned by the recurring tide, or be carried by descending conduits to an entirely safe distance from the great centres of population.

But any series of measures for "the improvement of the health of towns," must have reference not only to the drainage, but to the water supply; the collection and removal of refuse; lodgings for the poor; the supervision of the markets; the indiscriminate sale of intoxicating drinks; the care of the sick; and the burial of the dead. All these subjects, together with specific regulations and details of various kinds, must be considered in a sanitary code.

The regulation of the dwellings of the laboring classes, especially of lodging houses, where large numbers are crowded into small, non-ventilated apartments, is one of great importance, and the control of which by ordinances determining the conditions upon which they shall be occupied, will remove a prolific source of disease at all times, and of especial danger during epidemic seasons. The increasing area of building ground, and the construction of numerous tenements, or "model" houses, have already accomplished so much in this respect as to augur favorably for the future. None pay such heavy rents, considering the accommodations they have, as do the poor; and an appeal to builders and landlords who cannot be reached by any higher motive than that of self-interest, on that score alone, ought to furnish all that is needed to supply this great want.

I cannot avoid adding my own regret to the expression of that of His Honor the Mayor, that we have not

now in operation a City Hospital. That we have not, is perhaps owing to the sincere, but in my opinion the entirely groundless apprehensions of some of those who live in the vicinity of the building purchased for this purpose more than a year since. And although, for the very reason which makes it quite safe for its neighbors, viz., the impossibility of admitting any contagious cases into the same building with other miscellaneous ones, I did not think it so good an arrangement for *permanent* use as a plan which should provide for the erection, on a larger lot of land, of several small and separate structures whose aggregate cost should not exceed that of this building — yet, as a beginning, and until something better could be done, I hoped this would have been equipped and occupied.

This delay would have been a just cause of reproach to the humane and liberal city that Boston is, were it not well understood to be chargeable to the interposition of the Legislature in a matter which could have been left with entire safety to the competent judgment of the City Council and the citizens themselves.

If, however, the restrictions were removed, and the near proximity of the school-house to the hospital should be thought mutually disadvantageous; or if, from any apprehension of insecurity on the part of the inhabitants of the immediate vicinity, this plan should be abandoned; I hope that the ultimate success of the project will not be endangered, but that some other suitable location upon lands still vacant and belonging to the city, where these objections do not exist, will be assigned for it, so that all parties may thus be able to give it their cordial and efficient support.

I congratulate the Council that the discussion of the subject of intra-mural interments has been forever terminated by the ample and economical provision made by the city at the Mount Hope Cemetery, where those whose means are not large, as well as others, may, without unnecessary expense or sacrifice of feeling, bury their dead; thus removing the last obstruction to the discontinuance of a practice fraught with so much discomfort and danger to the living.

For the temporary deposit of the bodies of strangers; of those who are to be examined for legal purposes; and of those whose friends cannot otherwise provide it for them, the "House of Reception" in North Grove street, erected some years since by the Board of Health, is a most decent and convenient receptacle.*

I have alluded to the execution of Magee. As the responsible attending medical officer on that occasion, I desire to put upon permanent record the facts connected with that case, and the subsequent *post mortem* examination. I have therefore appended to this report, together with some comments thereon, a copy of the report of the autopsy, read at the time to the Boston Society for Medical Improvement, and of the discussion which followed; and, secondly, a copy of an article extracted from the *London Lancet*, a leading medical periodical, in which that journal has seen fit, with equal malignity and ignorance, to prefer charges of inhumanity in connection with that proceeding, which the state of the facts will by no means warrant.

I have the honor to remain, gentlemen,

Your obedient servant,

HENRY G. CLARK,

City Physician.

* See Plan and elevation, p. 20.

APPENDIX.

As Physician to the Jail, it was my duty to attend at that place, by request of the High Sheriff, on the occasion of the execution of Magee. There were several distinguished medical men present by the Sheriff's invitation; and at the autopsy, by mine, in addition to these, a number of others connected with the Medical College and the Massachusetts Hospital. That case has been the subject of some newspaper comment, and of some extraordinary strictures by the *London Lancet*, which I thought required some special notice. I copy here the professional account of the autopsy, for the purpose of introducing the article referred to, and of making some comments upon each, which I hope will explain the matter satisfactorily.

The following is the report of the autopsy:

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY F. E. OLIVER, M. D., SECRETARY.

JUNE 28th.—*Execution of Magee. Post Mortem Appearances.* Reported by Dr. HENRY G. CLARK.

The prisoner, Magee, was a healthy and very muscular man, but of small stature, and weighing about 130 pounds. Age, 28 years. He was executed in the rotunda of the Jail, at 10 o'clock, June 25th. He was dropped a distance of from 7 to 8 feet. There was not the least perceptible struggle or convulsion, but the urine was passed immediately. At the end of seven minutes, all the sounds of the heart were distinctly audible and the number of beats 100 in the minute. At nine minutes, the number was 98. At the end of twelve minutes, the number was 60 and the pulsations fainter. At fourteen minutes, the sounds had disappeared.

The body was lowered at 25 minutes past 10, at which time a careful examination of the chest revealed no perceptible sound or impulse of the heart. A small space under the left ear seemed to have escaped active compression, so that some circulation might have been continued through the carotid and jugular of that side.

The face was purple, and the pupils dilated, but there was no protrusion either of the eyes or tongue. The cord had taken just above the thyroid cartilage, and had left a deep oblique wale or indenture along its whole course, excepting at the part before mentioned, the knot, which was over the mastoid, having lifted it off from this point.

At 10.40 the cord, and the straps with which he had been pinioned, were removed. After this, the body, the face especially, became gradually paler.

At a few minutes past 11, Dr. Ellis commenced the autopsy, at the House of Reception. The body was pale, and the skin mottled. A small ecchymosis was noticed just above the line of the cord on the right side. The right sterno-cleido muscle was ruptured through one-half of its thickness. No lesion was discovered in any of the other soft parts of the neck. The os-hyoides was somewhat broken, but the spine was entirely uninjured. Dr. Shaw examined the clothing, to determine the presence of semen, but none was found.

At 11.30, a slight but regular pulsatory movement was observed in the right subclavian vein. Upon applying the ear to the chest, this was ascertained to proceed from the heart itself, which gave a distinct and regular *single* beat, with a slight impulse, 80 times in a minute. The chest was then opened, and the heart exposed, without in any way arresting the pulsatory movements. The right auricle was in full and regular motion, contracting and dilating with beautiful distinctness and energy. At 12 o'clock, the spinal cord having been previously divided, the number of contractions was 40 per minute, having continued with only a short intermission regularly up to this time. Dr. Ellis furnishes the notes of his own and Mr. Tower's minutes after this hour.

"The peculiar movements of the anterior wall of the right auricle gradually but occasionally recurred, either spontaneously, or excited by a passing current of air, until 1¾ o'clock. They could at any moment be excited by the point of the scalpel." Dr. Ellis being obliged to leave at this time, the remainder of the record concerning the heart was furnished

by Mr. Tower, one of the medical house pupils of the hospital. It is as follows:

"At 1.45, the movements still continued without stimulus. Five were noticed in a minute, with corresponding intervals. At 2.45, all automatic movements ceased, but the part still responded to the stimulus of the knife. At 3.10, deep irritation of the same kind was followed by slight movements. The irritability was most marked at the lower part, where the venæ cavæ enter the auricle. At 3.18, all movements ceased. On opening the heart, it was found to be perfectly normal. The left ventricle was contracted; the right, not. No coagula were found."

Brain healthy.

Both lungs collapsed completely, and were in every respect normal.

The liver and spleen were darker colored than usual, owing to the presence of an unusual amount of blood.

The stomach contained a whitish pulp, like softened bread. The mucous membrane had a pinkish tinge, particularly in the neighborhood of the pylorus. In the large extremity, for some distance below the cardiac orifice, were numerous whitish glandulæ, about a line in diameter.

The upper part of the small intestine contained much green, bilious fluid. The mucous membrane was of a pinkish color. Peyer's patches were very distinct. No lacteals were seen.

The other organs were examined and found healthy.

Dr. Jackson asked if any motion of the intestines was observed — to which Dr. Ellis replied in the negative. Dr. J. alluded to the case of a tumor removed from the shoulder, some fibres of muscle attached to which contracted under the stimulus of the knife, some time after its removal. He also alluded to the muscular contractions which were manifest after death in many cases of cholera, during the epidemic of 1833.

The absence of cerebral congestion, Dr. Gay thought probably due to the adjustment of the rope, which allowed circulation in the left carotid. He thought death might have been owing to the sudden shock.

Dr. Clark alluded to the three modes in which death takes place by hanging, viz.: apoplexy, asphyxia, and fracture of the spine, and attributed death in the present instance to asphyxia.

Dr. Ainsworth remarked, that all the appearances usually

observed in cases of hanging were here wanting, and thought that the first effect of the sudden fall was a powerful concussion of the brain, which paralyzed the body, as in cases where a blow or fall is received upon the extremity of the sacrum, and that death occurred afterward from strangulation.

D. H. J. Bigelow considered the motions of the heart to be solely due to local irritability.

Dr. Coale, in this connection, alluded to the unfortunate incident in the life of the celebrated Vesalius, in consequence of which he was banished from his country and died in exile. Not allowing a sufficient time to elapse after the death of his patient before proceeding to the examination, the musuclar irritability remaining in the body caused a pulsatory movement in the heart, which led to his arrest and punishment for murder and impiety.

Dr. Clark expressed the opinion that, as there was no lesion of any important organ, resuscitation might possibly have been accomplished by artificial respiration, &c., if efforts to that end had been made immediately upon the lowering of the body from the scaffold—that is, within half an hour after he fell. Strong shocks of electricity or galvanism would, in cases of accidental apparent death, destroy the little remaining vitality; and if these agents are used at all, they should be administered with great care.

The following is the article referred to, which is copied from the *London Lancet* for August 28, 1858, p. 235, and is entitled,

"AN EXECUTION IN THE HOUSE."

"A thief unhung is a sorry sight for honest men; but we know no spectacle more painful than an execution in the house of a medical man.* An eager zeal for physiological science has more than once betrayed anatomists into positions of painful dubiety; but we have never seen a more equivocal recital than that which has this week gone the rounds of the newspapers touching the proceedings of some American surgeons in the examination of a criminal who had been delivered into the hands of the hangman, and upon whom they subsequently performed what would appear to be little

* [The *insinuation* is, that the autopsy was done *privately*, or *surreptitiously*. C.]

less than a vivisection." "The appetite for hoaxes is so strong in America, that it might, perhaps, be hoped that some deception was practised in this instance; but the details are given with scientific truthfulness and accuracy."

Here follow the only passages which the *Lancet* has copied from the report, and which are re-printed to show how ingeniously an extract, apparently fairly made, may be unfairly used.

"At half past eleven, a slight but regular pulsatory movement was observed in the right subclavian vein. Upon applying the ear to the chest, this was ascertained to proceed from the heart itself, *which gave a distinct and regular single beat, with a slight impulse, eighty times a minute.* The chest was then opened, and the heart exposed, without in any way arresting the pulsatory movements. The right auricle was in full and regular motion, contracting and dilating with beautiful distinctness and energy. At twelve o'clock, the spinal cord having been previously divided, the contractions were forty per minute, having continued with only a short intermission regularly up to that time."

The *italics* are *not* those of the report.

"Finally," the *Lancet* says, "in the discussion that ensued, Dr. Clark expressed the opinion," &c., [which is here quoted.] It thus concludes, in these words: "That opinion is amply justified by the details given. It amounts, however, to the most serious condemnation of the proceedings adopted. The man was not dead, but in a state of 'suspended animation.' How, then, characterize such a vivisection? Every man must shudder at the thought of what is implied, and we do not trust ourselves to speak out the deserved censure."

It will be perceived that the *Lancet* does not emphasize or even refer to the material fact, that *the motions were not interrupted by a division of the spinal cord*, because that would have disproved its charge. It also ignores the fact that my *theoretical opinion*, which it tortures into an implied censure of my friend, Dr. Ellis, had no reference whatever to the heart's motion, but was suggested upon entirely different grouuds.

The Boston *Medical Journal*, commenting on this article, says: —

That this phenomenon was not caused by any remaining vitality in the system, is evident from the simple fact that the pulsations continued after the spinal cord was divided, showing that this phenomenon was owing to the inherent irritability of the muscular structure of the heart, which still responded to stimuli, as is well known to be the case for a considerable length of time after death, and which is often witnessed in cases where the autopsy is made soon after death. Opportunities are not very frequent for observing this in the human subject, since it is customary to wait many hours after death before making an examination; but any one may see it in animals that have been recently killed. We once had occasion to make an autopsy soon after the death of a patient, and found so much irritability remaining in the heart, that it would contract powerfully when pricked with the scalpel, for a considerable length of time after it had been removed from the body. Contractions of the voluntary muscles, sometimes to a remarkable degree, are also witnessed in the bodies of those who have died of cholera, especially when the limbs are smartly struck. In many cases, however, these movements take place spontaneously, and sometimes to a remarkable extent, so that all the limbs are in motion, and continue so for the space of half an hour. The same thing is witnessed in patients who have died from yellow fever.

In addition to the well-known instances of the persistence of muscular irritability not only after life was extinct, but after the removal of muscles from the body, Bernard, in his late work, "Sur la physiologie et la pathologie du Système Nerveux," furnishes us with facts which prove that contractility is a property belonging to muscular fibres as such, independent of the nervous or any other system. Having first shown conclusively by experiment, that the poison "curare" destroys the power of the motor nerve, he establishes the fact that portions of muscle, taken from animals destroyed by that poison, will contract with as much energy, when the proper stimuli are used, as under ordinary circumstances. He afterward states distinctly that "the independence of muscular contractility is a fact well established experimentally," and adds, after further researches, "that the contractile property of the *involuntary* muscles does not differ from that of the muscles under the influence of the will."

In allusion to the statement that the criminal was alive when dissected, as circulated by various newspapers, the Boston *Traveller* of the 2d inst., in the course of a long article on the subject, remarks as follows:—

"The professional report, however, gives no color for such a statement. On the contrary, it states expressly that when he was cut down all signs of life were absent. The fact that automatic motions of the *right auricle* of the heart, for they were confined to that, continued for some hours afterward, goes for nothing, because it will be observed that they were not interrupted by a division of the spinal marrow itself; for no one will pretend that this man, as the legend says St. Francis was, could be alive after he was *beheaded*. The supposition that he might 'possibly have been resuscitated immediately after he was lowered from the scaffold,' was predicated simply upon the fact that there was no apparent injury to the structure of any important organ, and that he was in precisely the condition of a drowned or asphyxiated person; and, it might be added, had not the slightest reference to this peculiar irritability of the heart."

We believe that under the circumstances it would have been as impossible to resuscitate Magee, after he was removed to the House of Reception, as it would be to restore to life a patient dead of cholera, who exhibited the phenomena of muscular contraction. Vol. lxix. p. 46.

In Kirke's "Handbook of Physiology," published in *London* in 1851, we find the following observations: "The heart, especially in amphibia and fishes, will continue to *contract and dilate regularly* and in rhythmic order, *after it is removed from the body* and completely emptied of blood." "*Sudden destruction of either the brain or spinal cord alone, or of both together, produces immediately a temporary interruption or cessation of the heart's action;* but this appears to be only the effect of the *shock* of so severe an injury; for, in some such cases, the *movements of the heart are subsequently resumed,* and if artificial respiration be kept up, may continue for a considerable time." "The persistence of the movements of the heart in their regular rhythmic order, after its removal from the body, and their capability of being then re-excited by an ordinary stimulus after they have ceased, *prove that the cause of their movements must be resident with the heart itself.*" pp. 98, 99.

My friend, Dr. S. L. Abbott, has called my attention to an article in the "Gazette Medicale" for July, 1858, and has been good enough also to furnish me with the following translated synopsis of it. It is the substance of a review of a work entitled "Recherches sur la durèe de la contractilité du cœur après la mort (communiquèes à la Sociétè de Biologie, Févriér, 1858,) par M. Valpland." "In a field mouse," the reviewer says, "under his experiments, 46½ hours after death, pieces of both auricles and venæ cavæ inferior, showed undulations of muscular fibres. The animal had died from a severe operation. In a dog that had been hung, a very decided movement of the right auricle was observed 93½ hours after death; the heart and lungs having been removed for 22 hours after death and placed in a dish exposed to the open air." M. Valpland himself says, "I have not been able as yet to make any observations on man; but I am fully persuaded that by employing the various processes which I have made use of to detect the amount of contractility after death, results analogous to those I have arrived at would be obtained; that is, that in certain cases, undulatory, spontaneous movements in these parts might be seen, by the aid of the microscope, persisting for more than 48 hours. And it would be interesting to study the influence of different kinds of death on these phenomena. The systolic movements *may continue in man more than* 24 *hours*, as appears by a fact observed by M. Emmanuel Rousseau, of which that learned anatomist has furnished me with this note. 'The following appearances I saw in company with my colleagues of the School of Anatomy at Rouen, in 1808. The observation was made on a woman who was executed about March or April of that year, and in whom the right auricle beat 24 hours after death, at the moment the chest was opened; and the movements lasted 5 hours after the pericardium was opened.'" He mentions as witnesses M.M. Lanmomier, Flaubert, Hippolyte and Jules Cloquet.

I have also been informed of a similar case by a very intelligent and respectable gentleman of this city, which he himself witnessed in Paris, in the spring of 1830. He went, between 7 and 8 o'clock in the evening, with an English medical man, to the *Morgue*, and there saw and examined the body of a man *who had been guillotined some* 10 *or* 12 *hours before*, in whom these motions of the heart were still observable. The fact was witnessed, he assured me, by numerous medical men.

These extracts and cases prove conclusively that the case of Magee was of precisely the same character. That is to say,

1. That the death was complete before the body was opened.

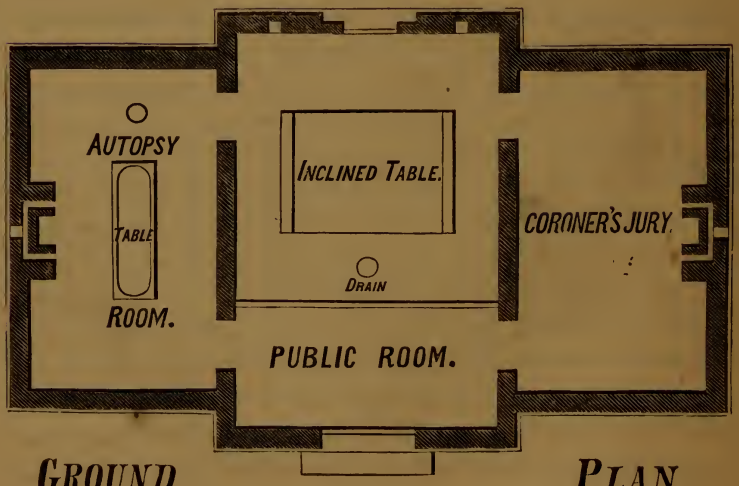
2. That the motions of the auricle were automatic, and not vital.

3. That the same motions would have continued for a certain length of time if the heart had been entirely removed from the body.

These cases, and others which might be quoted, must have escaped the observation of the editors of the *Lancet*, or they would never have ventured the opinion that the *post mortem* examination, as it has been proved to be, was a "*vivisection;*" or if they do not confess their *ignorance* on this point, they must plead guilty to the charge of wilfully perverting "a plain unvarnished tale" for the purpose of throwing an undeserved odium upon the medical profession of this city. The whole temper of the article, and the subsequent conduct of the editors in neglecting to take the slightest notice, so far, of an explanatory note addressed in respectful terms to them more than three months ago, by Dr. Ellis, than whom a more candid and humane gentleman does not exist, evince anything but the "entente cordiale" which should characterize the intercourse between members, however distant geographically, of a profession so noble as that of medicine, or of that courtesy which we have a right to expect from the conductors of a scientific journal which has a wide circulation in this country as well as in Great Britain. H. G. C.



HOUSE OF RECEPTION, NORTH GROVE STREET.



GROUND PLAN.



